(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 20 October 2005 (20.10.2005)

PCT

(10) International Publication Number WO 2005/099148 A1

(51) International Patent Classification⁷: H04J 14/02

(21) International Application Number:

PCT/US2005/011886

(22) International Filing Date: 8 April 2005 (08.04.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2004-24465

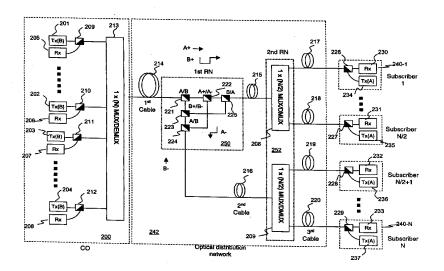
9 April 2004 (09.04.2004) K

- (71) Applicant (for all designated States except US): NOVERA OPTICS, INC. [US/US]; 480 S. California Ave., Suite 305, Palo Alto, CA 94306-1609 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): LEE, Chang-Hee [KR/KR]; 110-102 Hanwol Apt., Shinsung-dong, Yusong-gu, Taejon (KR). LIM, Dong-Sung [KR/KR]; 105-1703 Expo Apt., Jeonmin-dong, Yuseong, Daejeon 305-761 (KR).

- (74) Agents: VINCENT, Lester, J. et al.; Blakely, Sokoloff, Taylor & Zafman LLP, 7th floor, 12400 Wilshire Boulevard, Los Angeles, CA 90025 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: WAVELENGTH DIVISION MULTIPLEXING PASSIVE OPTICAL NETWORK HAVING MULTIPLE BRANCHES OF OPTICAL DISTRIBUTION



(57) Abstract: Various methods and apparatuses are described for a wavelength division multiplexing passive optical network (WDM-PON) that performs bi-directional communication. The WDM-PON may include two or more remote distribution nodes in between a central office and the most distant optical network unit. Each remote distribution node is located in a physically separate location. A first remote distribution node has two or more optical network units connected to the first remote distribution node. Each remote node separates one or more wavelength channels from a composite optical signal distributed through that remote distribution node.



Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.